

## REMARKS

Claims 1 through 19 are in this application and are presented for consideration. Claims 15 through 19 have been added. The new claims have been added to further highlight and more clearly point out the important features of the invention.

The original independent claims have been rejected as being anticipated by Fadner '127.

The present independent claims set forth two sets of flutes. These flutes are differentiated as one set being circumferential, and the other set being longitudinal.

The rejection states that Fadner describes longitudinal and circumferential flutes. Applicant has reviewed Fadner, and finds this reference to describe a roller with depressions on the surface. Figures 2 through 5 of Fadner appear to show that the depressions extend diagonally. In particular it appears that one set of the depressions extend from the lower left to the upper right, and the other set of depressions extend from the upper left to the lower right. Furthermore, both of these sets of depressions appear to extend symmetrically, and have angles of the same magnitude, with respect to a rotation axis. The rejection does not appear to indicate which set of depressions of Fadner is equated with the longitudinal flutes of the original claims, or which set of depressions of Fadner is equated with the circumferential flutes of the original claims.

Since both sets of depressions in Fadner are symmetrical and have the same magnitude about a rotational axis, neither set of depressions extend more circumferentially or longitudinally than the other set of depressions. Therefore Fadner does not disclose both a circumferential set of flutes and a longitudinal set of flutes. If one set of depressions in Fadner

are considered circumferential, then the other set of depressions must also be considered circumferential, since they both have the same angular magnitude in the circumferential direction. Likewise if one set of depressions in Fadner are considered longitudinal, then the other set must also be considered longitudinal. There is no circumferential and longitudinal distinction between the two sets of depressions in Fadner. Therefore the depressions in Fadner can not anticipate the circumferential and longitudinal flutes of the present independent claims.

The present independent claims therefore define over Fadner.

New independent claim 15 further emphasizes this distinction between circumferential and longitudinal flutes. Claim 15 sets forth that the circumferential flutes extend predominantly in a circumferential direction, and that the longitudinal flutes extend predominantly in a longitudinal direction. Fadner does not disclose a set of flutes which have a predominant circumferential direction, and another set of flutes which have a predominant longitudinal direction. Claim 15 therefore further defines over the applied prior art.

In particular, the inking roller of the invention comprises intersecting circumferential flutes 3 and longitudinal flutes 4. As can best be seen in Figure 3 of the application, each of the circumferential flutes 3 encompasses the roller in a very predominantly circumferential direction. The longitudinal flutes 4, by contrast, are almost in line with the longitudinal axis of the roller, offset by only a few degrees. Thus, the flutes 3,4 form a specific pattern on the roller which is characterized by longitudinal flutes which are almost parallel to the longitudinal axis of the roller and circumferential flutes which are circumferentially parallel to each other along the roller.

None of the cited prior art documents show or describe clearly distinguished circumferential and longitudinal flutes together on the surface of a roller wherein the circumferential flutes intersect the longitudinal flutes.

Figures 3 and 4 in Fadner et al. disclose a pattern defined by two depressions running around the roller 12 in opposite directions at identical angles, namely offset by 45 degrees with respect to the longitudinal axis of the roller 12. Thus, the two depressions do not form circumferential and longitudinal flutes, but rather both are running in the circumferential direction or in the longitudinal direction, depending on the definition of circumferential and longitudinal in this specific case.

Figure 2 in US patent 3,613,575 by Kantor et al. comprises a similar pattern of flutes to that discussed in Fadner, and very specific patterns in Figures 3 to 5 which comprise circumferential flutes only.

The same applies to US patent 3,690,254 by Krocheit et al, with the difference that the roll shown in Figure 4 only discloses a longitudinal flute.

US patent 4,287,827 by Warner et al. discloses different roll patterns in Figures 3 to 8. While the patterns of Figures 3 to 7 either comprise no flute at all or only one flute, the pattern shown in Figure 8 is equivalent to the pattern disclosed in Figures 3 and 4 of Fadner.

US patent 5,016.530 by Palmatiel et al. only discloses one circumferential flute on a roll 22.

A pattern defined by two flutes running around a roller, wherein the two flutes run around the roller in different directions at an identical angle, this time offset by approximately

60 degrees with respect to the longitudinal axis of said roller, is disclosed by US patent 6,701,839 B1 by Levy et al.

Finally, US patent 4,819,558 by Counard et al. comprises a pattern on a fluid-metering roll composed of chains of cells, wherein the cells of each chain are interconnected by channels. These chains cannot be described as longitudinal flutes or circumferential flutes.

Thus, none of the prior art documents shows or describes a roll or a cylindrical body comprising longitudinal flutes and circumferential flutes on its surface which intersect with each other. None of the cited documents, or any combination of them provides the information to the person skilled in the art that it can be advantageous to form a pattern on the surface of a roller which combines flutes which are almost parallel to the longitudinal axis of the roller with closed flutes running circumferentially around said roller. The way in which the rejection combines the documents in order to arrive at the subject of the invention is therefore untenable.

Claims 4, 11 and 16 set forth that the circumferential flutes extend in a direction greater than 70° from the rotational axis. The rejection appears to state that this slope angle could be determined through routine experimentation of Fadner. Applicant notes that in Fadner, the depressions and elevations are shown as being symmetrical. There is no indication that varying a slope angle would be beneficial depending on a particular application. Therefore the person of ordinary skill would have no incentive from Fadner to perform routine experimentation with regard to slope angle. These claims therefore further defines over the prior art.

Claims 17 and 18 sets forth that a direction of the circumferential flutes continuously curves as the circumferential flutes extend around the surface of the inking roller. In one of the

preferred embodiments of the present invention, the path of the circumferential flutes wanders to the right and left as the circumferential flute travels around roller. Applicant finds no teaching nor suggestion of this feature in the applied prior art. Furthermore, there is no indication in the prior art that varying the direction of circumferential flutes as the flutes extend around a roller would be beneficial. Therefore the continuously curving direction of the circumferential flutes is not obvious. Claims 17 and 18 therefore further define over the prior art.

Claims 5, 12 and 19 set forth that each of the circumferential flutes forms a closed loop or runs back into itself. The rejection of these claims states that it would have been obvious to modify Fadner in view of Yuichi '694 to arrive at the combination set forth in these claims. However Yuichi does not indicate that such closed loops would be beneficial in combination with the criss-crossing pattern of Fadner. Instead Yuichi specifically shows that only one set of grooves or flutes are provided. A person of ordinary skill would therefore have no incentive to combine the single set of grooves of Yuichi into a double set of depressions of Fadner. The design of Yuichi is not disclosed as being advantageous in a double set of grooves or flutes. Therefore it would not be obvious to modify Fadner in view of Yuichi. Furthermore, it would not be obvious to incorporate the design of Yuichi in a roller with two different sets of flutes, where each set of flutes has a different angular magnitude and non-symmetrical direction. Claims 5, 12 and 19 therefore further define over the prior art.

The present invention provides an inking roller with a unique design of flutes that improves ink transfer and improves printing quality. The present invention is an improvement

over the prior art designs and therefore worthy of patent protection.

If the Examiner has any comments or suggestions which would further favorable prosecution of this application, the Examiner is invited to contact applicant's representative by telephone to discuss possible changes.

At this time applicant respectfully requests reconsideration of this application, and based on the above amendments and remarks, respectfully solicits allowance of this application.

Respectfully submitted  
for Applicant,



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Attached: Petition for Three Month Extension of Time

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